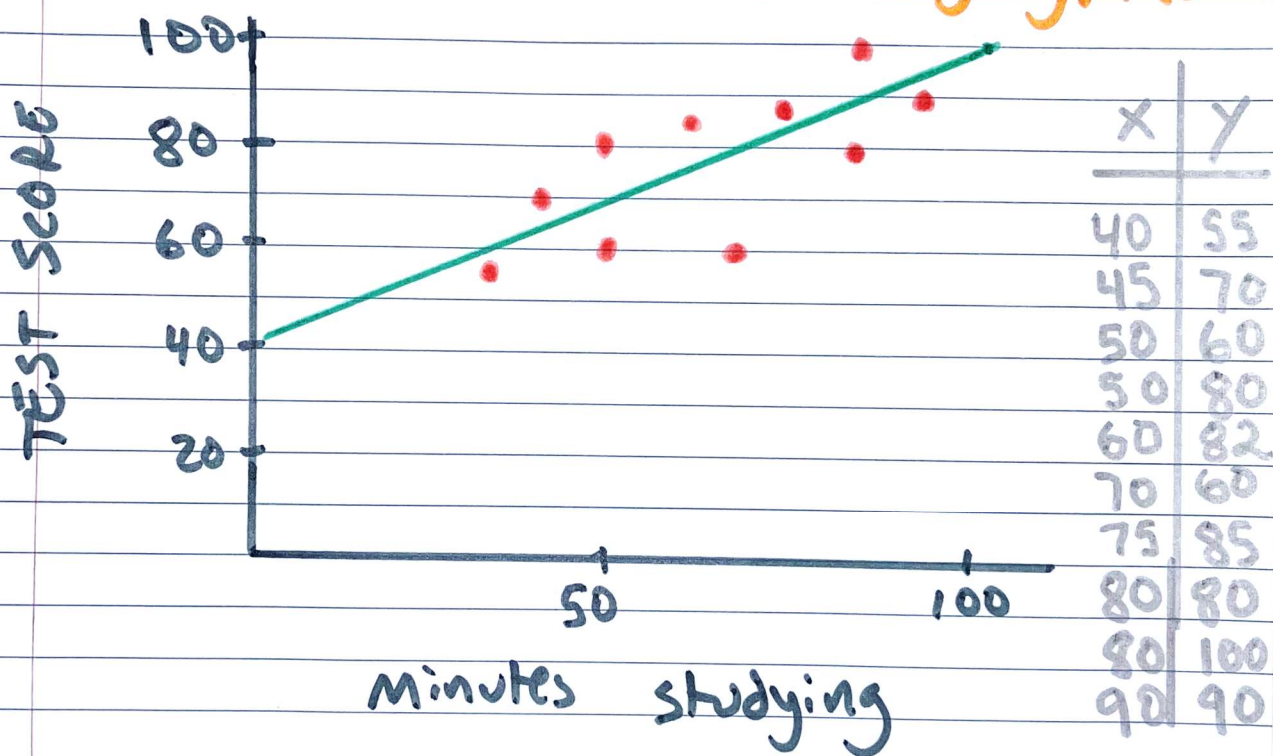


Lesson 6-3 \rightarrow Linking Scatter Plots to $y = mx + b$

A science teacher plots test scores, y , as a function of minutes studying, x .



Trend Line $\rightarrow y = mx + b$

slope \rightarrow

$$\frac{60}{100} = \frac{6}{10} = \frac{3}{5}$$

$$y = \frac{3}{5}x + 40$$

$$y = \frac{3}{5}x + 40$$

→ a student studying 0 hours is predicted to score 40 on the test

→ generally, students score 3 points better (Rise 3) for every 5 mins studying (Run 5)

→ a student studying 60 minutes is predicted to score

$$y = \frac{3}{5}(60) + 40$$

$$y = \frac{180}{5} + 40$$

$$y = 36 + 40$$

$$y = 76$$

NOTE!

It would be **WRONG** to say a student studying **60 minutes** is predicted to score **82 points** just because student 5 actually did study for 60 minutes and scored 82 points.

The Line is smarter than The DOTS!

The Line has the smartness of all the DOTS!